

CHAPTER 12 EARTH RETENTION SYSTEMS

SIFC-1201 GENERAL

The requirements of this chapter shall apply when construction includes earth retention systems elements as listed in SIFC-302.8.

SIFC-1202 CONSTRUCTION DOCUMENTS

SIFC-1202.1 Review and approval. The earth retention system construction documents shall be submitted for review and approval to the **BPRD** prior to permit issuance. Construction documents for earth retention systems which are to become a permanent part of the final structure shall be reviewed and approved by the **SER**, including field inspection requirements, prior to submission to the **BPRD**.

SIFC-1202.2 Preparation of construction documents. Earth retention system construction documents, including the related design calculations, shall be prepared, signed and sealed by a **RDP** experienced in the design of earth retention systems. In addition to structural design, the construction documents shall include the following:

- **Adjoining properties.** Recommendations for protecting adjoining properties, including existing public and private streets.
- **Slope protection.** Specification of responsibility for protecting all slopes in accordance with general practice, throughout the course of the project.
- **Dewatering.** Any requirements for dewatering of the excavation that are specified or assumed in the earth retention system design.
- **Installation.** System installation criteria, including allowable inward movement, pile installation and tie-back criteria, and requirements for inspection and monitoring of the earth retention system construction and adjacent properties.

SIFC-1203 FABRICATION AND ERECTION DOCUMENTS

SIFC-1203.1 Review and approval. The earth retention system fabrication and erection documents shall be submitted to the **SER** and **FCCSS** for review and approval prior to construction. The **GC** shall submit two sets of **SER**-approved fabrication and erection documents to **FCCSS** for approval. After County review and approval, **FCCSS** will return one set of County-approved fabrication and erection documents for use on the job site. County-approved documents shall be used by the **SIER** to conduct special inspections during construction.

SIFC-1203.2 Preparation of fabrication and erection documents. The **RDP** responsible for the construction documents shall also prepare, sign and seal the fabrication and erection documents.

SIFC-1204 INSPECTIONS

SIFC-1204.1 Special inspections required. In problem soils areas, as defined by the Fairfax County Public Facilities Manual, the **GER** shall perform the special inspections of the earth retention system. In non-problem soils areas, the **GER** or the **SIER** shall perform the special inspections. Earth retention systems shall have special inspections performed to determine compliance with County-approved construction documents and this SIFC-2000, including the following:

- **Compaction.** Compaction process to determine that materials' quality and in-place density tests comply with the County-approved specifications and geotechnical notes and the requirements of IBC-1704.7.
- **Backfill, drainage and waterproofing.** Backfill, foundation drainage systems, and waterproofing during and following their placement for compliance with County-approved backfill, foundation drainage systems, and waterproofing specifications.

SIFC-1204.2 Inspection reports. Inspection reports shall be submitted to the appropriate **RDPS** of record and **FCCSS**.

SIFC-1204.3 Deviations. Deviations from the County-approved earth retention system construction documents shall be subject to approval by the appropriate **RDP** of record and the **BPRD** and **FCCSS** prior to work continuing in the affected area. When the earth retention system is to become a permanent part of the final structure, deviations shall also be subject to approval by the **SER**.

SIFC-1205 COMPLETION OF EARTH RETENTION SYSTEM CONSTRUCTION

At the completion of the earth retention system construction, the **SIER** shall, after review and approval by the appropriate **RDPS**, submit a completion letter to **FCCSS**, and shall indicate the date of completion on the final report of special inspections. When the earth retention system is to become a permanent part of the final structure, the **SER** shall review and approve the completion letter prior to submission to **FCCSS**, with approval indicating that the system is acceptable as a structural element of the final structure.